REMARKS

The present response amends claims 2, 3, 11, 12 and 14, adds new claims 27-52 and requests reconsideration of the claims.

New claims 36-38 recite subject matter previously in claim 18. The bases for new claims 27-35, 51 and 52 is stated below. New claims 39-50 find support in the specification, for example, page 5, lines 4-11, page 8, lines 14-19 and 28-30.

Claims 2, 3, 11, 12, 14 and 23 are rejected under 35 USC 112 for allegedly claiming a range within a range. Claims 2, 3, 11, 12 and 14 are amended to overcome this rejection and new claims 27-35, 51 and 52 are added to separately claim the ranges originally in the amended claims.

However, claim 23 is not likewise amended because it does not claim a range within a range. It does not claim a range at all.

Claims 1 to 19 and 26 are rejected under 35 USC § 102(a) as being anticipated by any of Ring et al. [20010005735], [20020169234] and [6531524]. This rejection is traversed.

It is submitted that a toner composition cannot be anticipated by a powder coating composition because of the basic differences between them.

Toner compositions are applied in printing operations to produce highly localized and exact, resolved images. Powder coating compositions are applied to produce a surface finish over a much larger relative area. These different purposes for the particles require the toner and powder coating particles to have distinct sizes:

1. To achieve an acceptable resolution in the final printed image, and also for the overall handling and performance of toners, printers will typically employ toner particles having a NARROW SIZE DISTRIBUTION CENTERED AROUND A MEAN OF 5 TO 8μM. See, e.g., page 1, paragraph 2, of the present specification. For example, to achieve a resolution of 600 dpi requires particles of

c. 8 µm diameter (and there is obviously commercial pressure to produce particles of smaller size). Standard deviations in particle size of from 0.6 to 1µm are commonplace in toner compositions.

2. By contrast, thermoset powder coating compositions typically have a mean particle diameter [$d(v)_{50}$] in the range from 38 to 40µm, whereas thermoplastic powder coating compositions may have particles sizes ≥ 75µm and usually over 100µm.

3. Additionally, the standard deviation in the particle sizes of powder coating compositions also tends to be much higher than in toner compositions because the integrity of a final powder coating is dependent on the polydispersity of the powder particles. This polydispersity determines: i) the flowability of the powder and thereby consistency of powder delivery; ii) the amount of overspray in spray applications; iii) the degree to which particles can provide surface coverage or "wrap around" objects to be sprayed; and, iv) the powder packing density and thereby the melting rate, degree of cross-linking and prevalence of inclusions in the final coating.

4. In addition to requiring a narrow size distribution, toner particles are known to have a NARROW SHAPE DISTRIBUTION CENTERED ON A MEAN CIRCULARITY OF 0.95 - 0.96. [Circularity is a parameter that compares the perimeter of the projected particle image with the circumference of an area equivalent circle.] Within the art, the need to control circularity has lead to the prevalence of a "polymerization method" of toner production in which granulation is conducted using an aqueous medium.

5. Particle circularity is not of critical importance in powder coating compositions. Consequently the methods of production of powder coating compositions are not specifically adapted to control this feature.

Claims 1 and 20 to 25 have been rejected under 35 U.S.C 103(a) as being unpatentable over Hayashi et. al [20020192584] in view of Ring et al. [6531524]. This rejection is traversed.

Hayashi et al. do not teach or suggest a toner composition with a post-blended particulate additive of aluminum hydroxide and aluminium oxide, as claimed.

There are a number of additional distinctions between the subject matter of claims 1 and 20 to 25 and the Hayashi reference.

1. Claim 1 of the present invention defines a toner composition comprising A POST-BLENDED, PARTICULATE ADDITIVE of aluminium oxide and aluminium hydroxide. These particles are free to move within the final toner composition. In the Hayashi reference, by contrast, the aluminium (hydr)oxide and / or silica are not present as particulate additives in the black composite particles or the overall black magnetic toner. Instead, these materials constitute A COATING on the surface of the magnetic iron oxide particles present within the black composite particles (paragraphs [0033] to [0040] and [0047] to [0033]).

2. Particles of aluminium (hydr)oxide or silica are additionally not present during the formation of the black composite particles. According to paragraphs [0150] to [0155] of the Hayashi patent, aluminium or silicon compounds are dispersed in water in which magnetic iron oxide particles are suspended. In order to form a coating on these iron oxide particles, it is implicit that the aluminium and silica oxides must precipitate from a solution through nucleation onto the particle surface. This is supported by the exemplified aluminium compounds all being water soluble.

3. According to paragraphs [0068] to [0070] of Hayashi et al. the aluminium oxide and / or hydroxide coating is formed under an outer coating of carbon particles on the black composite particles. In that position, the aluminium (hydr)oxide and /

or silica acts to prevent desorption of the carbon from the surface of the particles, effectively acting as a glue (paragraph [0152]). As such, the aluminium (hydr)oxide DOES NOT DIRECTLY influence the fluidity of the black composite particles.

4. This conclusion is supported in paragraph [0166] in which Hayashi et al. states that the improved fluidity in their black magnetic toner is due to THE COATING OF CARBON on the surface of the black composite particles.

5. With respect to claim 20 of the present application, the developer composition is defined as being of a two-component form, comprising a toner composition amongst which are dispersed the carrier particles, such as magnetic beads. As discussed above, the Hayashi citation relates to a toner or developer comprising one single particulate component: according to paragraph [0156] black composite particles - comprising the magnetic carrier and carbon particles – are further integrated into the binder resin to thereby form a resin-kneaded particulate product.

Based on the above distinctions, Hayashi et al. cannot be considered to teach or suggest the toner or developer compositions defined in any of claims 1 and 20 to 25. These deficiencies in the Hayashi reference are not rectified by Ring et al.: The combined teaching thereof would merely constitute a toner comprising composite particles in which a wax silica was included within the aluminium (hydr)oxide glue to which a carbon coating was bound.

New claims 27-46, 51 and 52 are allowable for the same reasons the claims from which they depend are allowable, as well as for the additional recitations in these claims. Further, new claims 47-50 are allowable for the reasons detailed above, as well as for the additional recitations in these claims.

Respectfully submitted,

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